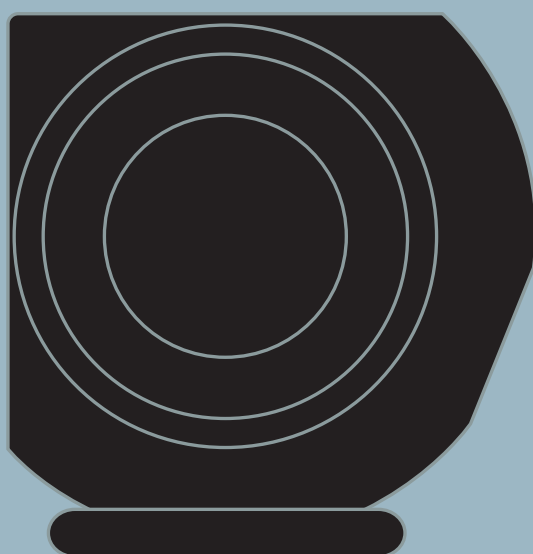


BeoLab 2

Type 6861, 6862, 6863, 6864, 6865, 6867
From serial no. 19367810

Service Center repair guide
English



HOW TO SERVICE

Big efforts have been made to introduce the highest quality and a low call rate. Therefore this product is suitable for the new Service Strategy which benefits the customer. In a service situation where there is an electrical fault in a BeoLab 2, the fault can be removed during one visit to the customer's home if you bring a Back-up suitcase with you. If it is a mechanical fault, the particular part can be replaced in the customer's home.

When the necessary part(s) arrive from service stock, the visit to the customer's home can be arranged.

Front line service

The BeoLab 2 must be serviced in the customer's home when dealing with electrical faulty or the exchange of mechanical parts. In this way, you avoid having to transport the heavy subwoofer (18kg) back and forth from the customer (box size: L 310 x W 260 x H 315 mm).

In the customer's home, it is possible to exchange the driver and slave units, the electrical chassis or transformer, as well as exchange the cabinet and foot.

Replacement of the cabinet can be done easily at the customer's home as it contains all the necessary parts. Only the loudspeaker units, the electrical chassis and the transformer must be put into the new cabinet.

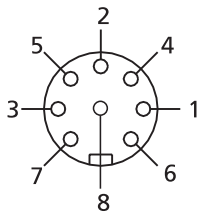
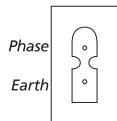
Electrical parts

For front line service we offer a Back-up suitcase (also applies to BeoLab 1). All the needed electrical parts are located in the Back-up suitcase (loudspeaker units and electronics).

That means the BeoLab 2 Back-up suitcase must be ordered and returned.

Service documentation

Service documentation for the BeoLab 2 is this guide (with part numbers for the Back-up suitcase and mechanical parts) and the User's Guide.

SPECIFICATION GUIDELINE FOR SERVICE USE		BeoLab 2
Type no.		See type survey
Dimensions W x H x D / Weight		260 x 315 x 310 mm / 17.7 kg
Cabinet finish		Aluminium, structure painted, grey
Power Consumption		Typical: 15 watts IEC65: 62W Stand-by: 0.4 watts
Maximum Sound Pressure Level		110 dB
Power amplifiers		1
Long-term maximum output power		850 watts
Effective Frequency range		23 - 120 Hz
Cabinet principle		Double balanced passive radiator system
Magnetically shielded		Yes
Woofer		1 x 9" (250 mm) flat diaphragm
Passive radiators		2 x 9" (250 mm) flat diaphragm
Net volume		13 litres
Bass equalization		ABL (Adaptive Bass Linearization)
Switch for loudspeaker position		Free, Wall or Corner
Input sensitivity		Adjustable by three position switch Corresponding to 83 dB, 88 dB or 91 dB for main speakers
Connections		
Power Link - Input		1
Power Link - Output		2
Mains		1
Power Link plug		
		Pin 1 Loop through, Power Link plugs
		Pin 2 Signal GND
		Pin 3 Audio Left 0V - 2V RMS
		Pin 4 Power Link speaker ON = > 0.5V, OFF = < 0.5V
		Pin 5 Audio Right 0V - 2V RMS
		Pin 6 Loop through, Power Link plugs
		Pin 7 Loop through, Power Link plugs
		Pin 8 Loop through, Power Link plugs
Mains Plug		
		
Subject to change without notice		

Warning

Static electricity may destroy the product!

A static-protective field service kit must always be used when replacement of the modules takes place. Use the ESD mat area for both the new and old modules.

TYPE SURVEY

To change voltage supply, e.g. when moving between two countries, it may be necessary to order a new electrical chassis, mains trafo and mains cable.

E.g.:

Moving from EU (type 6861) to Japan (type 6864); order 3 part nos. for Japan type 6864 (electrical chassis - mains trafo - mains cable).

TYPENÜBERSICHT

Zur Änderung der Spannungsversorgung, z.B. beim Umzug in ein anderes Land, kann die Bestellung eines neuen elektrischen Chassis, Netztrafos und Netzkabels erforderlich sein.

D.h.:

Beim Umzug aus der EU (Typ 6861) nach Japan (Typ 6864) müssen drei Posten für den japanischen Typ 6864 bestellt werden (elektrisches Chassis - Netztrafo - Netzkabel).

RECHERCHE DE TYPE

Pour changer de tension d'alimentation, par ex. en déménageant vers un autre pays, il peut être nécessaire de commander un nouveau châssis électrique, un nouveau transformateur secteur et un nouveau câble secteur.

Exemple :

Pour un déménagement de l'Union européenne (type 6861) vers le Japon (type 6864), il faut commander 3 références correspondant au type japonais 6864 (châssis électrique - transformateur secteur - câble secteur).

ESAME TIPOLOGICO

Per cambiare l'alimentazione elettrica, per esempio in occasione di uno spostamento all'estero, può essere necessario ordinare un nuovo quadro elettrico, trafo di alimentazione e cavo di alimentazione.

Per esempio.:

In caso di spostamento da un paese dell'UE (tipo 6861) al Giappone (tipo 6864), ordinare 3 parti per il Giappone tipo 6864 (quadro elettrico - trafo di alimentazione - cavo di alimentazione).

INSPECCIÓN DEL MODELO

Por ejemplo cuando se viaja entre dos países, puede que haya que solicitar un chasis eléctrico, un transformador y un cable de red nuevos para cambiar la fuente de alimentación.

Por ejemplo:

Si se viaja de Europa (modelo 6861) a Japón (modelo 6864), hay que solicitar los 3 números de referencia para el modelo 6864 de Japón (chasis eléctrico - transformador de red - cable de red).

TYPE OVERSIGHT

For at skifte spændingsforsyning, f.eks. ved flytning til et andet land, kan det være nødvendigt at bestille et nyt el-chassis, en ny nettransformer og en ny netledning.

Eksempel:

Ved flytning fra EU (type 6861) til Japan (type 6864) bestilles 3 varenumre til den japanske type 6864 (el-chassis - nettransformer - netledning).

TYPE-OVERZICHT

Om een voedingseenheid te vervangen, bijv. bij een verhuizing naar een ander land, is het soms nodig om een nieuw elektrisch chassis, een nieuwe transformator en een nieuw netsnoer te bestellen.
Bijvoorbeeld:
Bij een verhuizing vanuit de Europese Unie (type 6861) naar Japan (type 6864) bestelt u voor het Japanse type 6864 drie artikelnummers (elektrisch chassis, transformator en netsnoer).

タイプ調査

他の国へ移転するなどの理由から供給電圧が変わる場合、新しい電子シャーシ、電源トランス、電源ケーブルを必要とする場合があります。
例えば：
EU圏内（6861タイプ）から日本（6864タイプ）へ移転する場合、6864タイプに適合させるため、3部品（電子シャーシ、電源トランス、電源ケーブル）を注文する必要があります。

Type no.	El-chassis 999 Module	Mains trafo	Mains cable	Mains voltage	Used in
6861	3358459	8013610	6100245 (1.8m)	230V	EU
6862	3358459	8013610	6100401 (1.8m/7.5A)	230V	GB
6863	3358422	8013612	6100306 (1.8m)	120V	USA/TWN/CND
6864	3358423	8013611	6100247 (1.8m)	100V	JAP
6865	3358459	8013613	6100248 (1.8m)	240V	AUS
6867	3358459	8013610	6100386 (3m)	220V	KOR

BRIEF OPERATION GUIDE

Setting the POSITION switch

Use the POSITION switch is to ensure that the bass response suits the placement of BeoLab 2, and thus the surroundings.

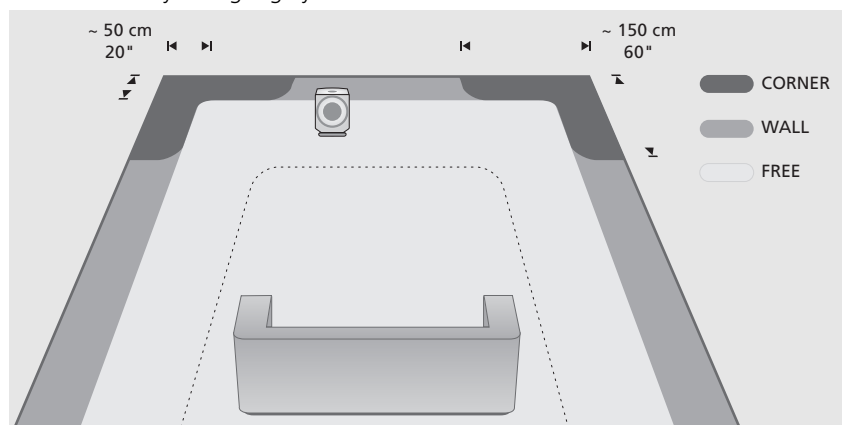
Which switch setting to choose depends on the distance from BeoLab 2 to the walls and corners of the room.

The POSITION switch has three settings:

CORNER: Use this setting if BeoLab 2 is placed in a corner – shown by the dark grey areas in the illustration.

WALL: Use this setting if BeoLab 2 is placed closer than approx. 50 cm (20") to a wall, and no closer to a corner than approx. 150 cm (60") – shown by the medium grey areas along the walls in the illustration.

FREE: Use this setting if BeoLab 2 is placed more than approx. 50 cm (20") from the wall – shown by the light grey area in the illustration.

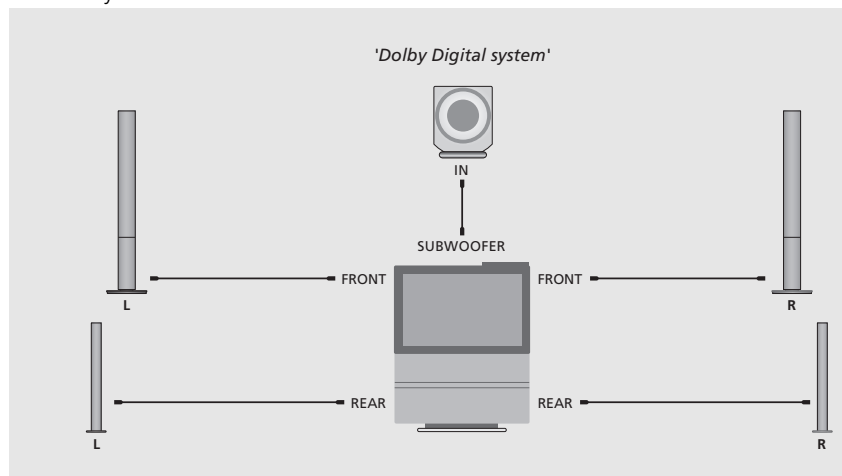


Never place BeoLab 2 behind your listening position. We recommend that you avoid placing any of your loudspeakers in the area inside the thin dotted line.

Setup examples

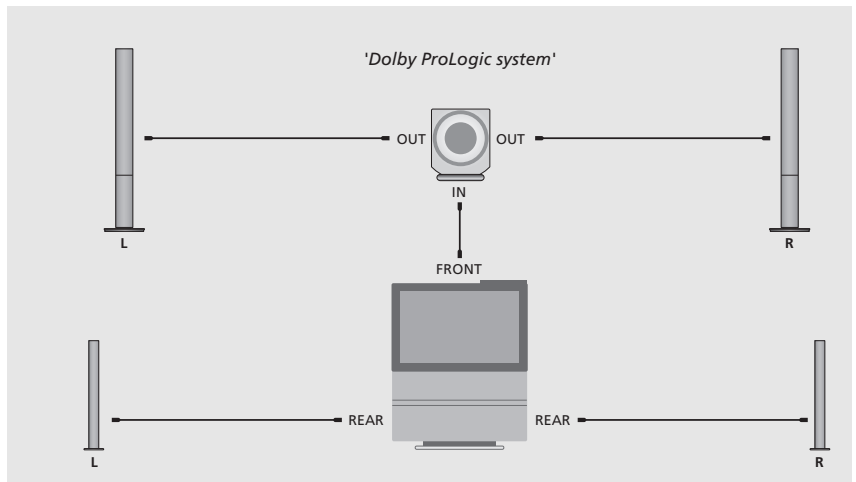
Dolby Digital system

- Connect one end of the cable to the socket marked IN on BeoLab 2, and the other end to the socket marked SUBWOOFER on your Bang & Olufsen system.
- Connect your front set of speakers to the sockets marked FRONT on your Bang & Olufsen system.
- Connect your rear set of speakers to the sockets marked REAR on your Bang & Olufsen system.



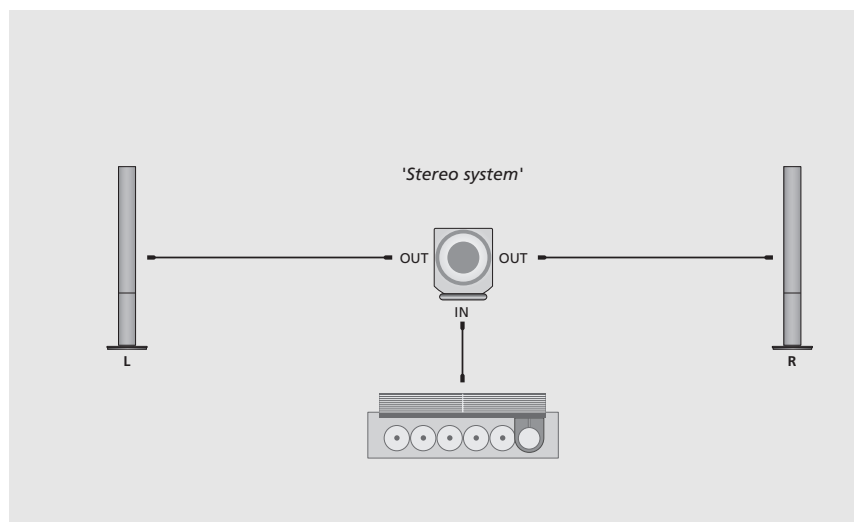
Dolby ProLogic system

- Connect one end of the cable to the socket marked IN on BeoLab 2, and the other end to one of the sockets marked FRONT on your Bang & Olufsen system.
- Connect your front set of speakers to the sockets marked OUT on BeoLab 2.
- Connect your rear set of speakers to the sockets marked REAR on your Bang & Olufsen system.



Stereo system

- Connect one end of the cable to the socket marked IN on BeoLab 2, and the other end to one of the speaker sockets on your Bang & Olufsen system.
- Connect your left and right set of speakers to the sockets marked OUT on BeoLab 2.

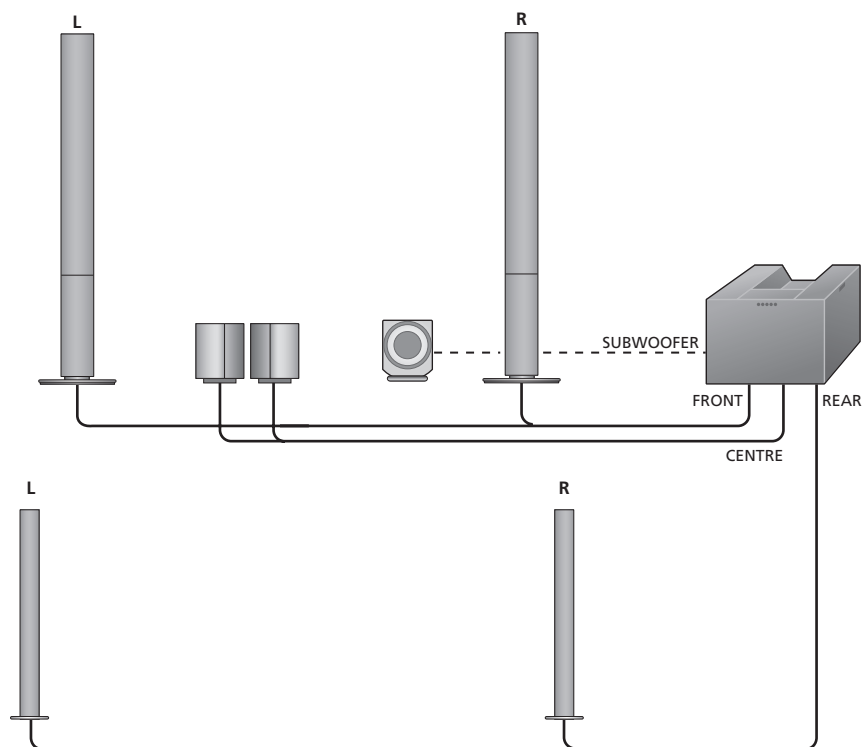


USA

Connect loudspeakers with BeoSystem 1

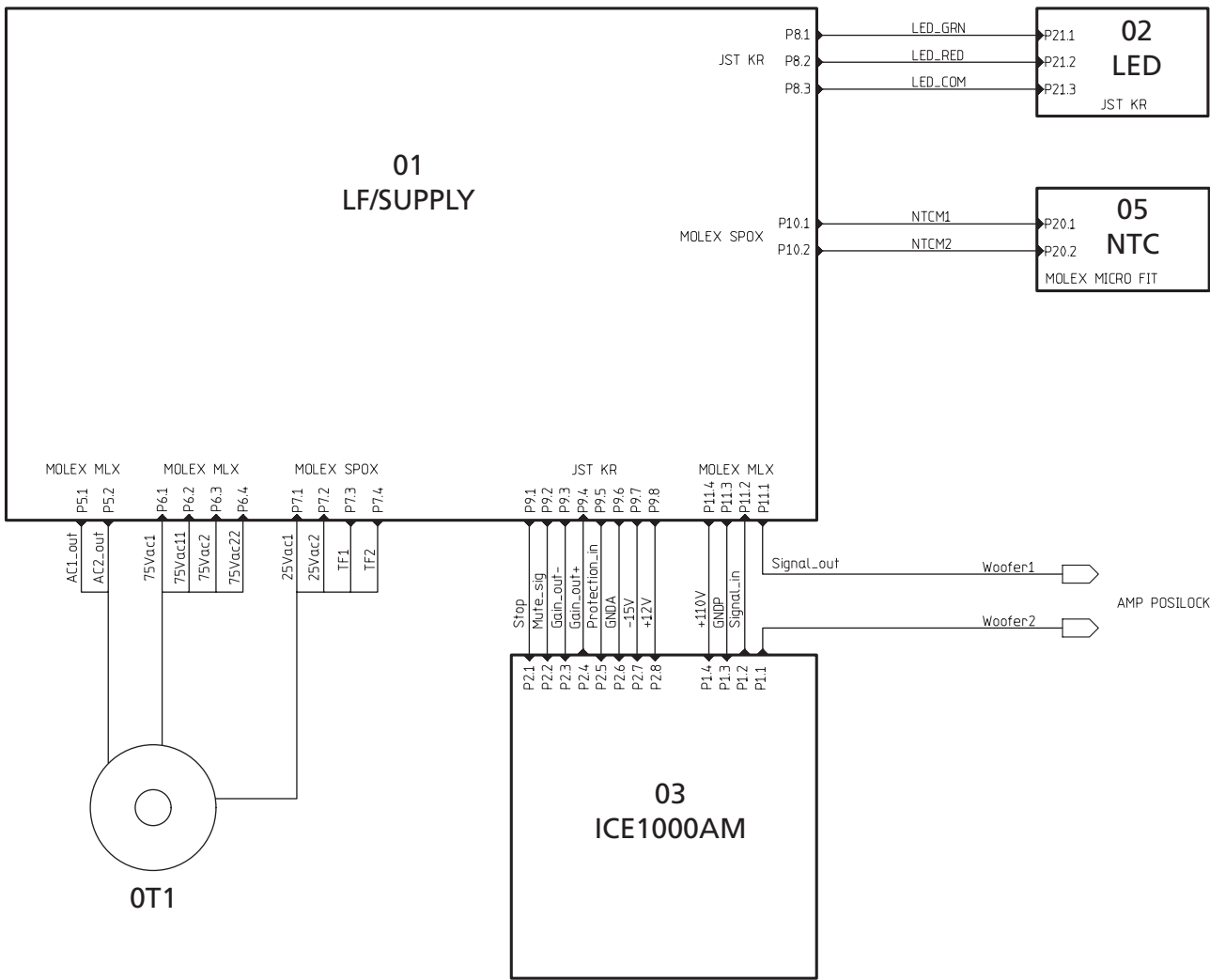
Using the cables enclosed with the loud-speakers, connect the speakers to the BeoSystem 1 rear connection panel. The front, center and rear sets of loudspeakers must be from the Bang & Olufsen range of Power Link speakers. However, you are not restricted to the speaker models shown in the illustration. For more information concerning sockets on BeoSystem 1, please refer to *Connection panels on BeoSystem 1* in the User Guide.

- Connect the two front loudspeakers to the sockets marked FRONT.
- Connect the two rear loudspeakers to the sockets marked REAR.
- Connect both centre speakers to the socket marked CENTRE in the following manner: Connect one loudspeaker to its counterpart, and connect the second loudspeaker to the CENTRE socket on BeoSystem 1. You can also use this looping method when connecting your front or rear loudspeakers. Refer to the guide enclosed with your speakers for more information about 'looping' your loudspeakers.
- You can connect a subwoofer to the socket marked SUBWOOFER.

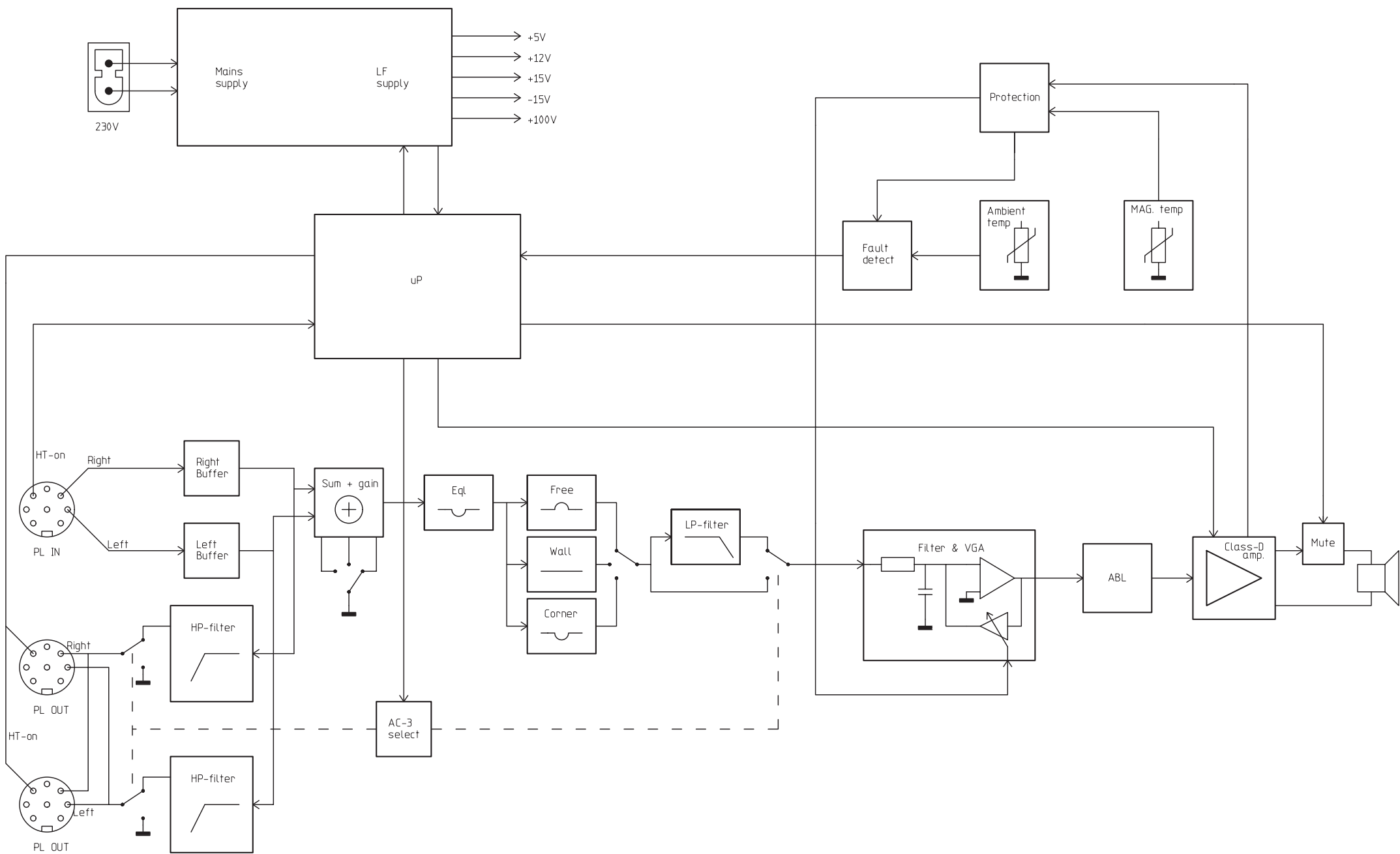


Regardless of which method you use when connecting your speakers, remember to set the L • R • LINE switch on the speakers to L and R (left and right channel), respectively.

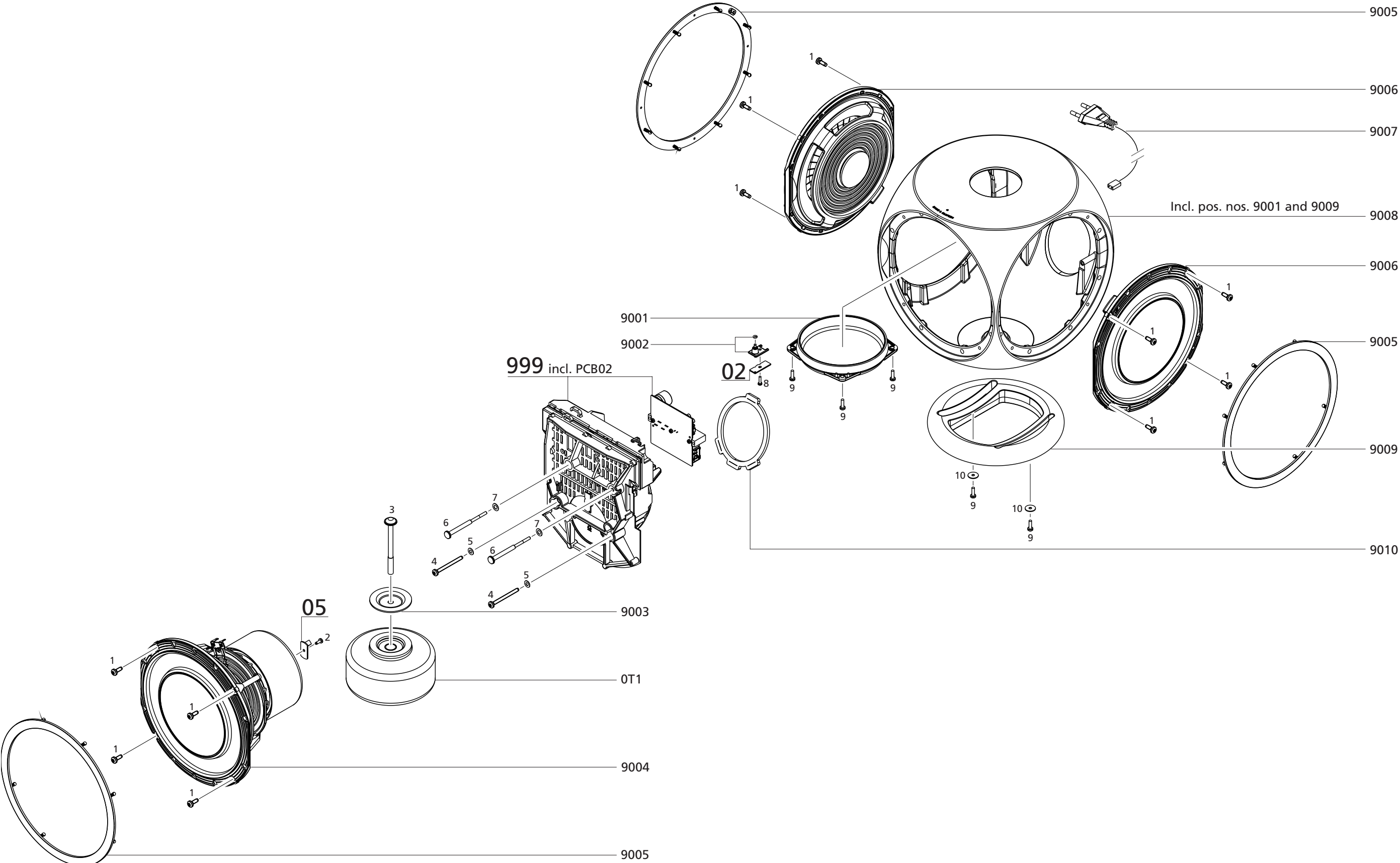
WIRING DIAGRAM



BLOCK DIAGRAM



LIST OF AVAILABLE PARTS
BeoLab 2



BeoLab 2

9001	2623008	Cup f/handle
9002	6150027	Optical fibre w/O-ring for PCB02
9003	2620132	Washer
9004	8480329	Bass unit
9005	2954028	Bezel
9006	8480330	Passive radiator
9007	6100245	Mains cable 1.8m - EU 230V
	6100401	Mains cable 1.8m/7.5A - GB 230V
	6100306	Mains cable 1.8m - USA/TWN/CND 120V
	6100247	Mains cable 1.8m - JAP 100V
	6100248	Mains cable 1.8m - AUS 240V
	6100386	Mains cable 3m - KOR 220V
9008	2569632	Cabinet, grey incl. cup and rubber foot
9009	2752080	Rubber foot
9010	3340201	Gasket f/socket panel

OT1	8013610	Mains trafo - EU, GB, KOR
	8013612	Mains trafo - USA, TWN, CND
	8013611	Mains trafo - JAP
	8013613	Mains trafo - AUS

02Module	8000434	PCB02, LED
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05Module	8000433	PCB05, NTC
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999Module	3358459	El-chassis (LF/Supply, ICE1000A, LED) - EU, GB, AUS, KOR
	3358422	El-chassis (LF/Supply, ICE1000A, LED) - USA, TWN, CND
	3358423	El-chassis (LF/Supply, ICE1000A, LED) - JAP

Survey of screws and washers

1	2054035	Screw 50 x 14mm
2	2056009	Screw 3.5 x 10mm
3	2058038	Screw 8 x 95mm
4	2054030	Screw 50 x 56mm
5	2624072	Washer
6	2054029	Screw
7	2624073	Washer
8	2054026	Screw 30 x 12mm
9	2015174	Screw 4 x 14mm
10	2622546	Washer

Parts not shown

6277524	Set of wires
3375257	Product cover
3629144	Special tool f/bezel
3395304	Back-up suit case f/EU, GB, AUS, KOR type 6861, 6862, 6865, 6867
3395179	Back-up suit case f/USA, TWA, CND type 6863
3395180	Back-up suit case f/JAP type 6864

Packing

3392658	Carton
3396105	Foam packing (1 set consists of 2pcs.)
3346038	Foam
2777037	Handle (holder sheet)
2777038	Handle (strap)

User's Guide

3506312	Danish	3506321	Portuguese
3506313	Swedish	3506322	Greek
3506314	Finnish	3506323	Brazilian
3506315	English	3506324	Polish
3506316	German	3506325	Russian
3506317	Dutch	3506326	Hebrew
3506318	French	3506327	Japanese
3506319	Italian	3506328	Korean
3506320	Spanish	3506329	Taiwanese



Static electricity may destroy the product!

REPAIR TIPS

Service position

Disassemble the BeoLab 2 see section 6.

Extend the Power Link cable to the BeoLab 2, if necessary, with the cable from the Back-up suitcase.

The BeoLab 2 cannot switch to ON mode without a signal transmitted from source through the Power Link.

Dismantle the NTC-PCB from the bass unit and connect it to the chassis.

If the NTC-PCB is not connected, the BeoLab 2 will go in protection mode.

It is possible to switch the BeoLab 2 to ON mode without connecting the bass unit.

It is now possible to measure at the test points, see page 5.9.

What to exchange

If all voltages are 0V and the fuses have not blown, there may be an interruption of the power supply in the mains trafo.

If it is possible to switch the BeoLab 2 to ON mode, but the sound is distorted/missing exchange the bass unit.

If the mains supply is present but it is still not possible to switch the BeoLab 2 to ON mode exchange the electrical-chassis.

If the fuses are blown, exchange of the electrical-chassis is necessary because the failure may be intermittent.

Note!

A thermal overload shuts down the BeoLab 2. Disconnect the mains for a few second to reset the BeoLab 2.

CLEANING

Clean the surfaces of BeoLab 2 using a soft, lint-free cloth which is wrung firmly in a solution of lukewarm water containing a few drops of e.g. dish washing detergent.

The speaker units may be cleaned with a vacuum cleaner, set to the lowest level.

Never use alcohol or other solvents to clean any part of the BeoLab 2!

MEASURING POINTS



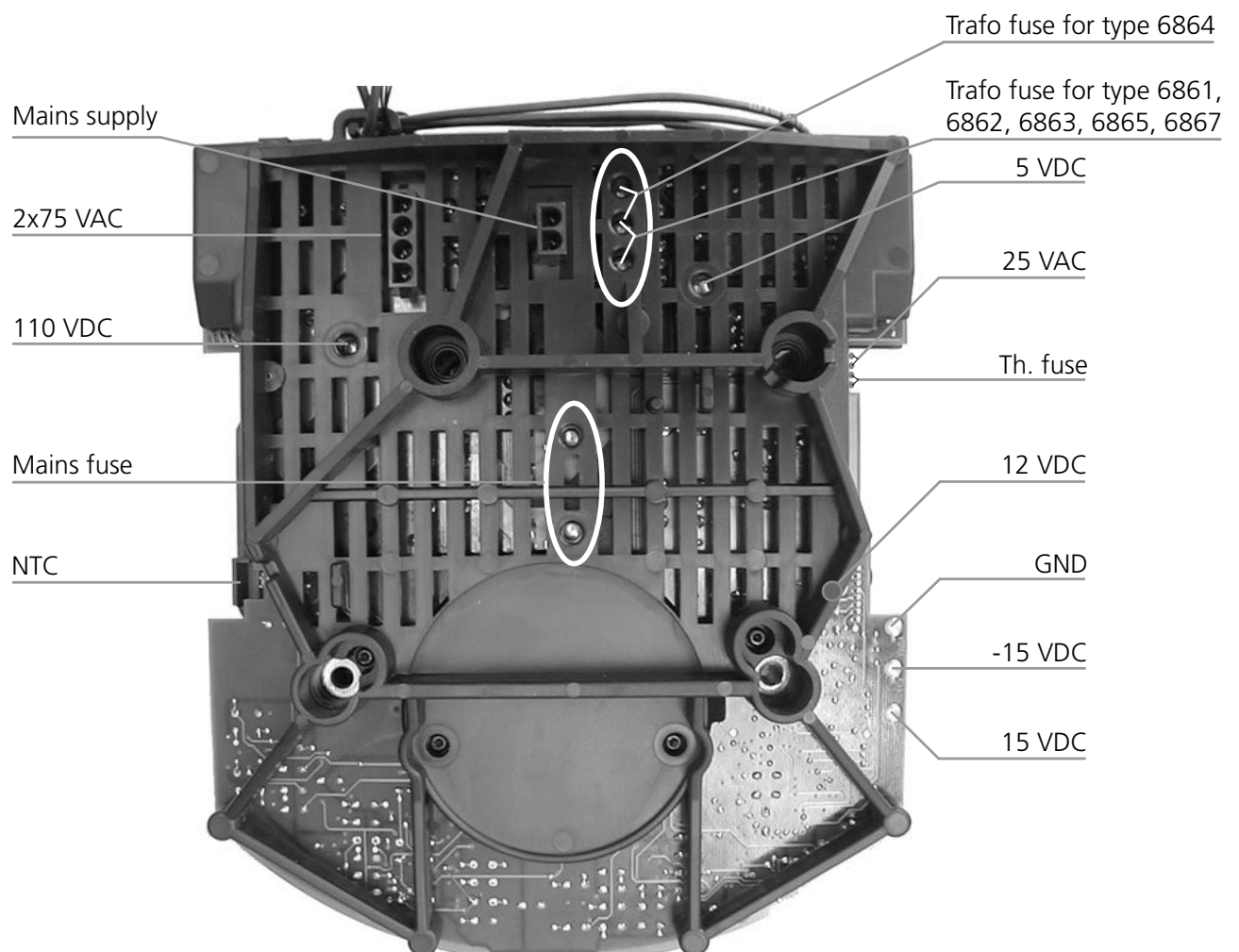
STATIC ELECTRICITY
MAY DESTROY THE
PRODUCT

WARNING!

The mechanical limit for the driver is easily reached when the vacuum tightness in BeoLab 2 is broken.

Note!

All measurements have to be done with the NTC module connected !



DISASSEMBLY

The bezels on the units are easily pulled off using the special tool from the Back-up suitcase.

To protect the paintwork while disassembling the BeoLab 2, place the BeoLab 2 on the extra rubber foot from the Back-up suitcase.

DEMONTAGE

Die Verschlüsse der Einheiten können mit dem Spezialwerkzeug aus dem Servicekoffer leicht herausgezogen werden.

Zum Lackschutz während der Demontage des BeoLab 2 stellen Sie den BeoLab 2 auf den zusätzlichen Gummifuß aus dem Servicekoffer.

DEMONTAGE

Les biseaux des haut-parleurs sont faciles à retirer à l'aide de l'outil spécial de la valise de remplacement.

Pour protéger la peinture au moment du démontage du BeoLab 2, placez le BeoLab 2 sur le pied supplémentaire en caoutchouc de la valise de remplacement.

SMONTAGGIO

Le cornici delle unità possono essere facilmente rimosse per mezzo dell'apposito utensile in dotazione con la valigetta di servizio.

Per proteggere il rivestimento in vernice durante lo smontaggio di BeoLab 2, posizionare l'apparecchio sui piedini supplementari in gomma in dotazione con la valigetta di servizio.

DESMONTAJE

Los biseles de las unidades se extraen fácilmente con la herramienta especial incluida en la maleta de soporte.

Para proteger la pintura durante el desmontaje del BeoLab 2, colóquelo sobre el pie de goma adicional de la maleta de soporte.

ADSKILLELSE

Det er let at trække pyntekransen på enhederne af med specialværktøjet fra back-up kufferten.

Når du adskiller BeoLab 2, kan du anbringe højttaleren på den ekstra gummifod fra back-up kufferten for at beskytte lakeringen.

DEMONTAGE

In de back-upkoffer zit een speciaal gereedschap waarmee u de vatten van de luidsprekerunits gemakkelijk kunt lostrekken.

Plaats de BeoLab 2 op de extra rubberen voet uit de back-upkoffer om bij het demonteren van de BeoLab 2 het lakwerk te beschermen.

分解

ユニットの枠はバックアップ・スーツケースに入っている特殊な道具を使って、簡単に引き外すことができます。

分解作業中にBeoLab 2の塗装を保護するため、バックアップ・スーツケースに入っているゴム製脚に載せて作業を行ってください。

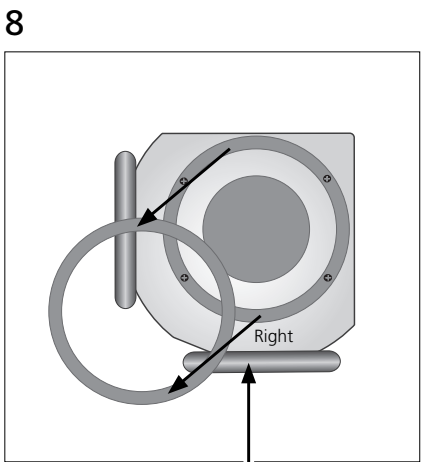
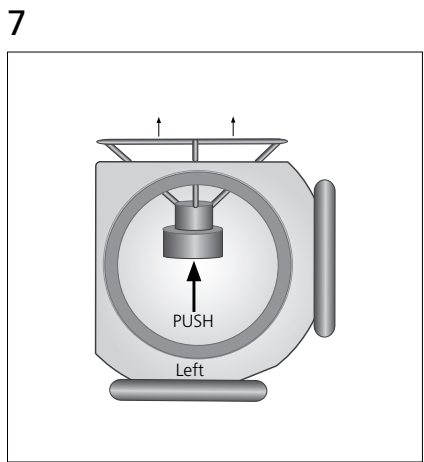
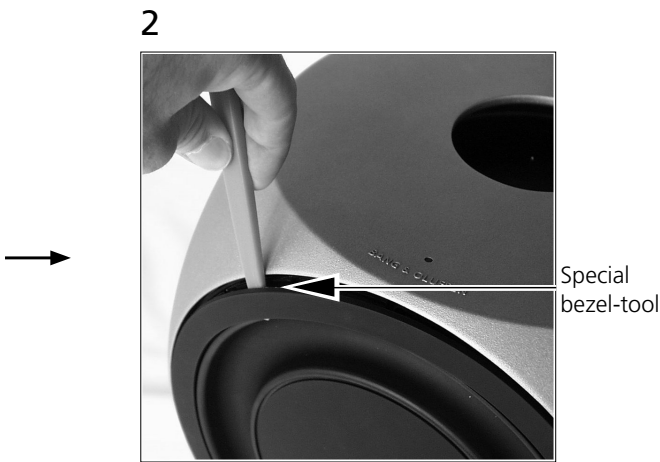
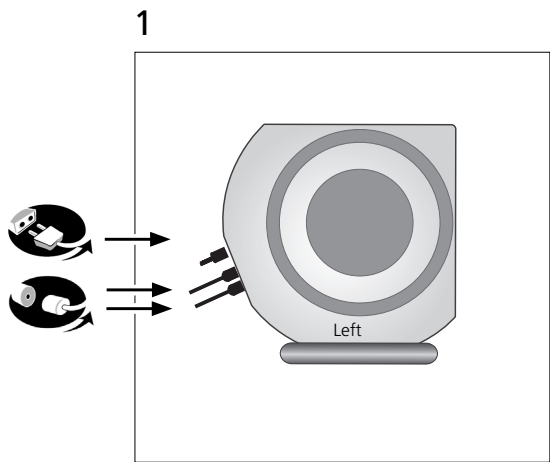
DISASSEMBLY



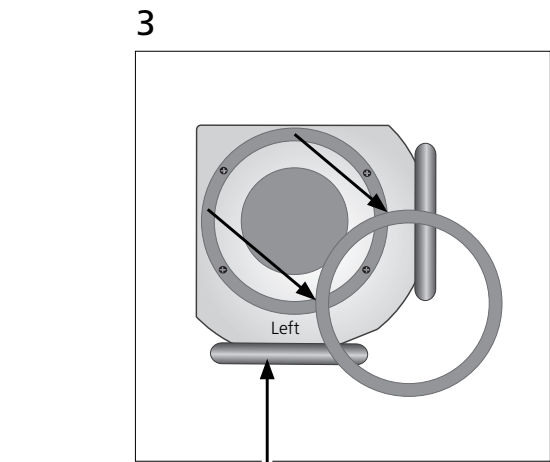
STATIC ELECTRICITY
MAY DESTROY THE
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WARNING!

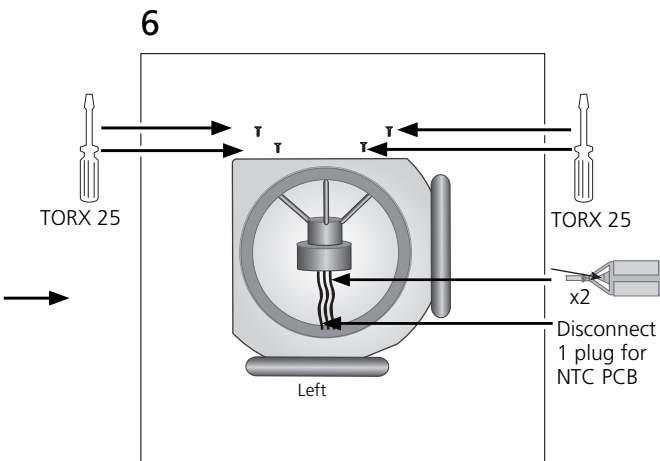
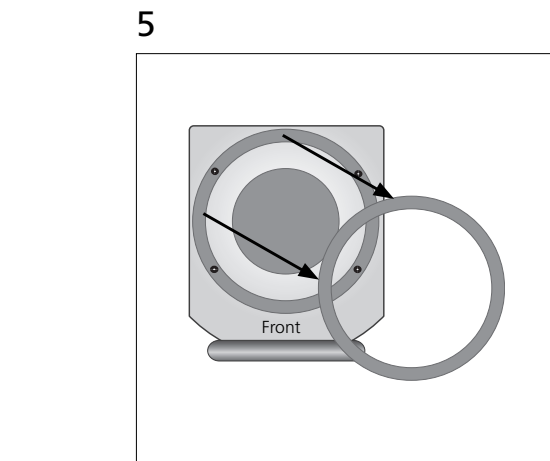
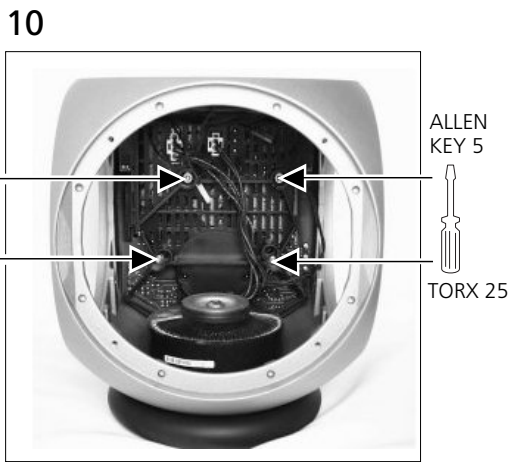
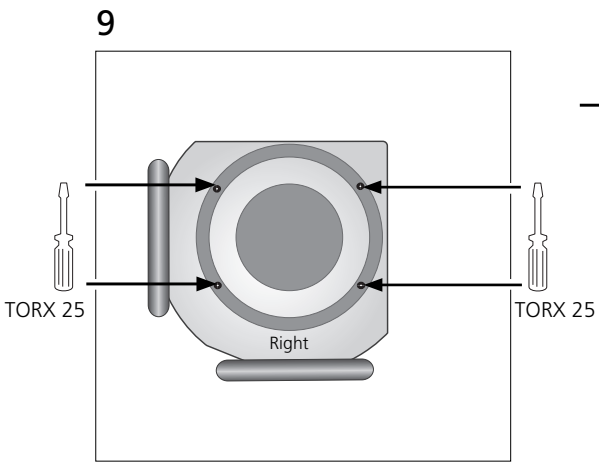
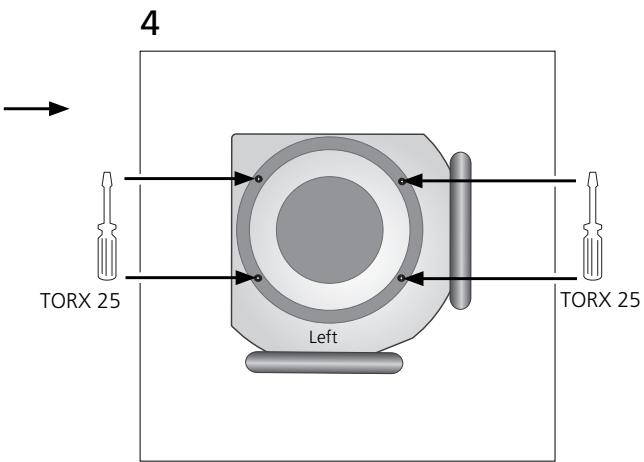
The mechanical limit for the driver is easily reached when the vacuum tightness in BeoLab 2 is broken



Extra rubber foot from the back-up suitcase



Extra rubber foot from the back-up suitcase



The NTC-PCB must be connected when the chassis is in service position ready for voltage measuring

INSULATION TEST

BeoLab 2 must be insulation tested if it has been dismantled.

Make the test when the BeoLab 2 is reassembled and is ready to be returned to the customer.

Insulation test at the Service center

Short-circuit the two pins of the mains plug and connect them to one of the terminals of the Insulation tester. Connect the other terminal of the insulation tester to ground on the Power Link socket.

To avoid damaging the BeoLab 2, it is essential to ensure that both terminals of the insulation tester have good contact.

Slowly turn up the voltage control of the insulation tester until a voltage of 2.5kV(ac) is obtained.

Maintain that voltage level for one second, then slowly turn it down again.

During the testing the current must not exceed 10mA.

Insulation test at the customer

Remove the mains cable from the wall outlet.

Place a jumper across the two AC plug prongs.

Use a multi-meter, set for measurements in the Ohm-area.

Place one lead from the multi-meter on the AC plug and place the other lead on ground at the Power Link plug.

The resistance during this measurement must be of 1 Mega Ohm or more.

Resistance measured below 1 Mega Ohm indicates an abnormal situation and corrective action must be taken.

Please note:

Avoid all skin contact with the AC plug and all other metal parts while performing the test, as this contact may influence the measurement.

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